

## **REMARKS**

Applicant has carefully reviewed the office action mailed on January 10, 2006 and respectfully submits the following remarks.

***Claims 1-32 are rejected under 35 USC 102(b) as being anticipated by Ludwig (4,339,743).*** Applicant respectfully traverses this rejection of claims 1-32.

There is at least one important recitation of the claims, recited in all independent claims 1, 9, 17, and 25, which is clearly not taught, disclosed or anticipated by the Ludwig reference. The pending claims recite a thermal linking agent to provide a low-loss thermal path between the input signal resistor and the input power resistor, such as recited in claim 1 similar recitations are found in claims 9, 17 and 25.

The Ludwig reference does not teach, disclose or otherwise anticipate thermal coupling between signal port resistors and power port resistors; this is in sharp contract to the claimed invention where there is tight thermal coupling between signal port resistors and power port resistors.

Consider what the Ludwig actually does teach. Ludwig in every occurrence of his specification describes 30 as a base, meaning a mechanical platform. The only further description of 30 occurs in Ludwig at column 3, lines 22-24: "base 30 is made from a fire retardant fiberglass board and has the same rhombic shape as that of the prior art's base 10, with mounting holes 24 and 26 proximate the opposite corners of the major axis." The fact that Ludwig does not deal with of thermal control is clear when the references states that base 30 is to be made from a fire retardant material. It is therefore clear that there is no instance in the Ludwig reference of base 30 being a thermal linking agent in Ludwig as the examiner claims.

Moreover, the pending claims have language that recites "wherein the input power signal provided to the input power resistor operates to maintain a constant power dissipated within the thermally stabilized device," (as recited in claim 1) or the like.

Because the cited reference does not teach a thermally stabilized device, as discussed above, it additionally cannot anticipate this recitation of the claims.

Applicant additionally would like to address the unwarranted reliance by the Examiner of whether the Ludwig reference does or does not have electrically interconnected components. Applicant's claims are not limited to non-electrically interconnected components, thus the recognized patent legal term "comprising" used in the claims. This is intentional. While it is true that Applicant's specification does teach that the input signal resistor(s) and the input power resistor(s) can be electrically distinct this is not required. It is important to note that the fact that Ludwig has electrically interconnected resistors was raised only in response to the examiner's assertion in the previous office action of July 19, 2005 that, "*Ludwig discloses the claimed invention at Figs. 1-3 with any of two[sic] the resistors 50, 54 and 56 as input or input power resistors and any two of the terminal 68 forming ports 68, where there are many combinations since there are 6 ports.*" Applicant respectfully submits that focus on this aspect is unduly and unfairly limiting to the claimed invention. As clearly described above, there are at least two recitations, having to do with the thermal linking agent and thus thermally stabilized device having a constant power dissipation, that are in and of themselves sufficient to distinguish the claimed invention over the Ludwig reference, and thus to defeat the Ludwig reference as the basis of a valid 35 USC 102(b) reference.

Applicant additionally must respectfully take issue with the examiner's position that the claims are not patentable over the Ludwig reference because the claims do not recite that all resistors remain at the same constant temperature. This recitation is not necessary to be in the claims as pending particularly given the thermal linking agent distinctions of the claimed invention over the Ludwig reference.

With respect to the rejection of the dependent claims, it is noted that these claims depend from independent claims 1, 9, 17, and 25 and thus are also believed to be patentably distinct.

Moreover, with regard to claim 8, the basis of rejection is not understood. The claim does not state that the input signal resistor and the input power resistor may be the same, as stated in the rejection. This is the second time that Applicant has asked the Examiner to clarify this basis of rejection; on page 16 of the last response this issue was previously raised. The examiner has not responded and thus it is respectfully submitted that the finality of the rejection is improper and should be withdrawn.

Also, the discussion at page 3 of the July 19, 2006 office action, and repeated at page 2 of the January 10, 2006 office action, directed to variance of the total power in response to temperature coefficients versus the total power of the Ludwig device is not understood. It is also not understood against which claim(s) this comment is directed. Clarification is respectfully requested. This is the second time that Applicant has asked the Examiner to clarify this basis of rejection; on page 16 of the last response, dated October 27, 2005, this issue was previously raised. The examiner has not responded and thus it is respectfully submitted that the finality of the rejection is improper and should be withdrawn.

In light of the foregoing arguments, reconsideration and withdrawal of the 102(b) rejection of claims 1-32 is earnestly solicited at the examiner's earliest convenience. A notice of allowance of all the claims respectfully requested.

***Claims 1-8 are rejected under 35 USC 102(b) as being anticipated by Thompson.*** Applicant respectfully traverses this rejection of claims 1-8.

Like the Ludwig reference, Applicant respectfully submits that the Thompson reference fails to disclose, teach or otherwise anticipate the thermal linking agent and constant power dissipation within a thermally stabilized device, and thus must fail as the basis of a 35 USC 102(b) rejection.

Thompson utilizes physical movement to vary the thermal transfer set point (page 1, col 1, lines 50-51; page 1,col 2, lines 55ff; page 2,col 1, lines 14-16; page 2, col 1, lines 17-23; page 2, col 2, lines 8-12; claim 1, lines 42-43; claim 2, lines 52-54; claim

4, lines 72-73; claim 5, lines 8-10; claim 6, lines 16-18; claim 7, lines 21-25) and thermal transfer to regulate *voltage* (page 2, col 1, lines 30-33; page 2, col 1, lines 41-45; page 2, col 1, lines 53-58; page 2, col 1, lines 69ff; page 2, col 2, lines 9-11; claim 1, lines 38-43; claim 2, lines 48-54; claim 3, lines 59-66; claim 4, lines 68-72; claim 5, lines 4-8; claim 6, lines 15ff; claim 7, lines 6ff). The claimed invention utilizes externally supplied feedback power to regulate *total power*, and the thermal transfer remains constant.

The output of the Thompson device is regulated voltage and not power (page 1, col 1, line 38; page 2, col 1, lines 30-31; page 2, col 1, lines 34-38; page 2, col 1, lines 57-58; page 2, col 2, lines 27-29; claim 1, line 38; claim 2, line 48; claim 3, line 59; claim 4, line 68; claim 5, line 4; claim 6, line 15; claim 7, line 6) with a mechanical set point (page 1, col 1, lines 50-51; page 1, col 2, lines 55ff; page 2, col 1, lines 14-16; page 2, col 1, lines 17-23; page 2, col 2, lines 8-12; claim 1, lines 42-43; claim 2, lines 52-54; claim 4, lines 72-73; claim 5, lines 8-10; claim 6, lines 16-18; claim 7, lines 21-25). The output of the apparatus of the present invention is the improvement in performance which naturally occurs because each resistor exists in a constant temperature environment (ignoring ambient), due to the total power being held constant which means resistor temperatures are kept constant (ignoring ambient).

Thompson offers no feedback, as the regulating action is produced by the opposing temperature coefficients of the resistors (page 1, col 2, lines 10-13 and page 1, col 2, lines 20-22; page 2, col 1, lines 30-33; page 2, col 1, lines 54-55; page 2, col 1, lines 69ff; claim 1, lines 38-39; claim 2, lines 48-49; claim 3, lines 59-61; claim 4, lines 68-70; claim 5, lines 4-6; claim 6, lines 15-22; claim 7, line 6ff). The present invention uses calculated external power feedback to maintain overall constant power in the device.

Thompson varies the thermal power transfer between the two resistors physically (page 1, col 1, lines 46-47; page 1, col 1, lines 50-51; page 2, col 1, lines 39ff; page 2, col 2, lines 9ff; page 2, col 2, lines 18-21; claim 1, lines 40-43; claim 2, lines 50-

54; claim 4, lines 72-73; claim 5, lines 8-10; claim 6, lines 1-4; claim 7, lines 22-24), while the present invention does not vary thermal transfer.

Thompson requires one resistor to have a positive temperature coefficient and the other resistor to have a negative temperature coefficient (page 2, col 1, lines 69ff; claim 3, lines 63-66; claim 4, lines 73ff; claim 5, lines 10-13, claim 7, lines 10-13), or at least one resistor to have a negative coefficient (claim 1, lines 43-45; claim 2, lines 54-55; claim 6, lines 18-19), while the present invention has no similar requirement. In fact, the temperature coefficients on the resistors of the present invention do not matter.

Thompson requires a means for manually varying the position of the inner resistor (claim 6), while the present invention has no similar requirement.

Thompson in no place discloses "total constant power". Even if that were the case, Thompson does not use calculated power feedback to achieve it.

Moreover, the claims have language that recites "wherein the input power signal provided to the input power resistor operates to maintain a constant power dissipated within the thermally stabilized device" (as in claim 1) or the like. The cited reference does not teach a thermally stabilized device as discussed above.

With regard to claims 2-8, these claims depend from claim 1 which Applicant respectfully submits has been shown to be patentably distinct over the Ludwig and Thompson references of record. Reconsideration and allowance of these claims, as well as all claims, is therefore earnestly requested at the examiner's first convenience.

### ***The Finality of the Rejections Should be Withdrawn***

Applicant must respectfully but strenuously argue that the finality of the office action mailed January 10, 2006 is improper and should be withdrawn. Not only have the claims never been amended, thereby no new issues have been raised, but the

Examiner has failed to answer questions raised by Applicant in the first response mailed on October 27, 2005. Please refer to the underlined portions of Applicant's remarks with regard to the rejection of the claims under the Ludwig reference. Without these questions being answered, Applicant cannot understand the full basis of rejection and cannot understand how to fully respond to the rejections.

Applicant must additionally take issue with the assertion at page 5 of the January 10, 2006 office action that Applicant's arguments fail to comply with 37 CFR 1.111(b) and (c). Applicant submits that the prosecution record of the applicant clearly shows that Applicant has fully and in good faith responded to each basis of rejection put forth by the examiner, even pointing out with particularity when the office actions in the application are not clear and do not make sense (see above).

All claims 1-35 are believed to be in allowable condition and such allowance is respectfully requested at the Examiner's earliest convenience. The Examiner is cordially invited to contact the undersigned if there are any questions about this application or response.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Renee' Michelle Leveque", is written over a horizontal line.

Renee' Michelle Leveque  
Registration No. 36,193  
Leveque IP Law, P.C.  
221 East Church Street  
Frederick, MD 21701  
Phone (301) 668-3073  
Fax (301) 668-3074